ULSS 008798-15

USER'S LOGISTICS SUPPORT SUMMARY

TESTER, FUEL INJECTOR
CD3

NSN 4910-01-124-9123

MARINE CORPS SYSTEMS COMMAND
QUANTICO, VA 22134-5010

JANUARY 2001
PCN 132 106040 00

DEPARTMENT OF THE NAVY
Headquarters, U.S. Marine Corps
Washington, DC 20380-0001

31 January 2001

1. This User's Logistics Support Summary (ULSS), authenticated for Marine Corps use and effective upon receipt, advises the Fleet Marine Force and other selected commands of the plan to field and logistically support the Tester, Fuel Injector, CD3, NSN 4910-01-124-9123.

2. Submit notice of discrepancies or suggested changes to this ULSS to: Commander, Attn: PSL, MARCORSYSCOM, 2033 Barnett Ave., Suite 315, Quantico, VA 22134-5010. In addition, forward an information copy to the Project Officer at the following address: Commander, MARCORSYSCOM, Attn: PM TMDE, MARCORSYSCOM 2033 Barnett Avenue, Suite 315, Quantico, Virginia 22134-5010.

3. This ULSS supersedes LAP(s) 87-98 of 25 MARCH 1999

4. This ULSS is applicable to the Marine Corps Reserve.

BY DIRECTION OF THE COMMANDER MARINE CORPS SYSTEMS COMMAND

OFFICIAL:

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DISTRIBUTION: PCN 132 106040 00

USER'S LOGISTICS SUPPORT SUMMARY (ULSS) FOR THE TESTER, FUEL INJECTOR

1. Introduction. This ULSS details the procedures for fielding the Tester, Fuel Injector. The information provided in this ULSS advises the Operating Forces and other selected commands of the plan to field and logistically support the CD3 Cummins and Detroit Diesel Tester, Fuel Injector NSN 4910-01-124-9123. The Tester is a fast, safe and extremely accurate means of calibrating Cummins and Detroit diesel fuel injectors.

a. Source of Requirement. Mission Need Statement for General Purpose Mechanical Test Equipment, No. LOG 50, applies.

b. Points of Contact

TITLE	LOCATION AND CODE	TELEPHONE
PROGRAM MANAGER	MARCORSYSCOM/PM-TMDE QUANTICO, VA 22134	(703)784-4457 DSN 278-4457
PROJECT OFFICER	MARCORSYSCOM/GPMTE QUANTICO, VA 22134	(703)784-5819 DSN 278-5819
ASSISTANT PROGRAM MANAGER LOGISTICS	MARCORSYSCOM/APML PM-TMDE QUANTICO, VA 22134	(703)784-4497 DSN 278-4497
WEAPON SYSTEM AND EQUIPMENT (WS/E) MANAGER	MARCORLOGBASES CODE 835-1 ALBANY, GA 31704	(229)639-6551 DSN 567-6551

c. System Description. The Tester unit is moveable and self-contained. The unit includes all accessories for testing fuel injectors of both Cummins and Detroit diesel fuel injectors, as well as a calibration audit kit for the unit itself. The Tester is contained in a cabinet made of welded steel 1-1/4 inch square tubing, and angle iron. The cabinet contains the instruments and controls for the system. The console is constructed with vibration absorbing mounts. The fuel output data for the Unit Under Test (UUT) is shown cumulatively on a Light Emitting Diode (LED) display in mm^3/stroke for the number of strokes set by the operator. Once the set number of strokes is reached, the final cumulative reading will remain visible until the next set number of strokes has been completed. At this point the LED will automatically update the reading for that particular set.

d. Operational Characteristics. The Tester is equipped with a digital fuel delivery display (0.1mm^3/stroke resolution), 5hp synchronous drive system motor, with flywheel (maintain speed at ± 1 RPM), calibration fluid reservoir (thermostatically controlled to ± 1° F with primary and final stage filters), hydraulic clamping devices (plunger-to-body for Cummins, or body-to-support for Detroit with monitor gauge and timing light), and an injector supply (rail) pressure regulator (0-200 psi pressure gauge).

e. Replaced Systems and Equipment

(1) The Tester, Fuel Injector replaces the following equipment in the Marine Corps inventory:

TAMCN	NOMENCLATURE	MODEL #	NSN
C7060	Calibrator, Injector, Detroit Diesel	HA255	6625-01-128-2142

(2) Disposition instructions are as follows: Gaining commands shall locally dispose of the replaced item in accordance with local procedures and UM 4400-124. The replaced item shall be disposed once the Tester, Fuel Injector has been placed in service.

2. Administrative Information

a. Nomenclature. Tester, Fuel Injector

b. Table of Authorized Material Control Number (TAMCN). C70612B

c. Stores Account Code. 3

d. National Stock Number. 4910-01-124-9123

e. Item Designator. 10604A

f. Unit of Issue. Each

g. Unit Cost. $37,652.00 Tester, Fuel Injector
$4,303.00 Detroit Kit (Part # 67-7632)
$6,424.00 Cummins Kit (Part # 67-7633)
$7,594.00 Audit Kit (Part # 67-7710)
Total $55,973.00

h. Support Costs. $260.00

i. Physical Characteristics:

	Operational Configuration	Storage and Shipping Configuration
Length	30.0 inches	36.0 inches
Width	50.0 inches	54.0 inches
Height	56.0 inches	62.0 inches
Square	10.4 square feet	13.5 square feet

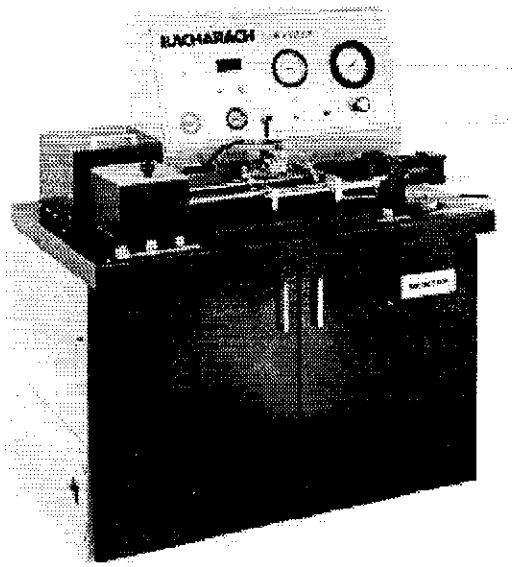

Figure 1. Tester, Fuel Injector

j. Physical Characteristics:

Cube	48.6 cubic feet	69.8 cubic feet
Weight	1200 pounds	1300 pounds
Stowage	square	square

k. Petroleum, Oil and Lubricants:

TYPE	YEARLY CONSUMPTION	FREQUENCY OF CHANGES
Cambox oil: SAE 30W motor oil	6 U.S. gallons	Every 3 months or 120 operating hours
Calibrating fluid: SAE J967	24 U.S. gallons	Every 3 months or 120 operating hours

l. Equipment Density. Normal

m. Resource Reporting. None

n. Power Requirements. The Tester, Fuel Injector will require a 230VAC, 3 phase, 60Hz power source with a 30 Amp circuit breaker. A kit including a 50Hz motor will be provided for NATO 50Hz power sources. All electrical connections will conform to NFPA70 and will include wall mount circuit breaker box with a power cut off switch and 40ft of neoprene covered cable for power connection from the circuit breaker box to the Tester.

o. Associated Weapon Systems and Equipment. None

3. Fielding Methodology

a. General Fielding Plan. The Tester, Fuel Injector will be fielded horizontally. Unit allowances are provided in Appendix A.

b. Method of Fielding. The Tester, Fuel Injector will be shipped from the manufacturer's plant directly to the using command. This action will be initiated by MARCORSYSCOM, PM-TMDE.

4. Logistics Support

a. Maintenance Support

(1) Maintenance Concept. The using unit will be responsible for first, second, and third echelons of maintenance. Maintenance at this level will consist of inventory, checking fluids, fluid changes, filter changes and replacement of other minor components, cleaning, lubrication, and minor adjustments.

Fourth echelon maintenance and calibration will be the responsibility of the local calibration laboratory (also see paragraph (2) below). The Installation/Operation/Maintenance Manual (TM 10604A-14&P/1) includes all operating and maintenance tasks.

(2) Designated Support Depots. A team of calibration technicians at Marine Corps Logistics Base, Barstow, CA will be available to perform calibration and repair tasks that are beyond the capability of the local technicians. For this service, call Mr. Ron Pitcher, DSN 282-7220, FAX 282-7016, or Comm (760) 557-7220.

(3) Calibration Requirements. Calibration is required per MCO 4733.1_. The manufacturer's calibration procedures shall be utilized until approved instrument calibration procedures are written and provided by the Naval Warfare Assessment Station, Corona, CA, Metrology Division, DSN 933-4660 COMM (909) 273-4660. Calibration procedures are being developed at this time, and will be fielded through normal channels when completed.

b. Contractor Support Requirements

(1) Interim Contractor Support. N/A

(2) Depot Support. N/A

c. Manpower, Personnel, and Training

(1) Personnel Requirements. The Tester, Fuel Injector system introduces no new operator or maintenance Military Occupational Specialties (MOSs) in the FMF or non-FMF units. The Tester shall be operated and maintained (through 3rd echelon) by maintenance personnel possessing a secondary MOS of 3524 (Fuel and Electrical Systems Mechanic). The Tester shall be calibrated and maintained (4th echelon) by MOS 2871 (TMDE Technician) and MOS 2874 (Metrology Technician).

(2) Training Requirements. The objective of the Tester, Fuel Injector training program is to ensure adequate training of operators and maintainers throughout the Tester's life cycle. This will be accomplished by integrating Tester specific material into all related existing courses of instruction at the Marine Corps Service Support Schools (MCSSS) at Camp Lejeune and by sustainment training at the owning unit.

(3) Training Support Items. The MCSSS at Camp Lejeune, NC will teach the Tester as part of their normal curriculum.

d. Supply Support

(1) General. During the installation period, repair and replacement parts for the Tester will be maintained by the using units supply system. Follow-on spares will be sole source and will be purchased through Sassy Management Unit (SMU).

(2) Replenishment. All spare parts and consumables will be available through normal supply channels as either Secondary Repairables, (SECREPS), or as Using Unit Responsibility Items (UURI's). Using units will be required to requisition spare parts and consumables thru the SMU.

e. Support Equipment

(1) Special Tools. N/A

(2) Common Tools. The following tool sets will be used to maintain the Tester, Fuel Injector.

NOMENCLATURE	NSN	TAMCN
Tool Kit, General Mechanic's	5180-00-606-3566	C70362T
Tool Set, Common #1	4910-01-238-8115	C70732B

(3) Special Purpose Test Equipment. N/A

(4) General Purpose Test Equipment. The following items contain all required test equipment and calibration standards to conduct fourth echelon maintenance:

NOMENCLATURE	NSN	TAMCN
The Calibration Facility, Transportable	6625-01-343-2559	A01767G
Electronic Test, Measurement, and Diagnostic Equipment Repair Facility	6625-01-340-3850	A06187G

(5) Application Program Sets and Test Program Sets. None

(6) Other Support Equipment. N/A

f. Technical Publications. Technical manuals (TMs) will be delivered concurrent with fielding of the Tester. Technical publications will identify the procedures to operate, assemble, calibrate, adjust, install, test, inspect, repair, and make fully operational the Tester. The following table identifies the Tester publications:

PUBLICATION NUMBER	TITLE	PCN
TM 10604A-14&P/1	Installation/Operation/ Maintenance Manual for the Bacharach Injector Tester CD3	500 010604 00
TM 10200-14/3	General Purpose Mechanical Test Equipment Listing	180 002820 00

Each hardware shipment will include two copies of the over-packed commercial grade user's manuals that are adequate for operation of the item. Address questions on distribution or requisitioning of technical manuals to the Project Officer, who is listed in the Points of Contact paragraph of this ULSS.

g. Computer Resources Support. N/A

h. Facilities

(1) Existing Facilities. Existing facilities are adequate for the storage, operation, and training needs of the Tester, Fuel Injector. It is not necessary for current facilities to possess humidity or climate controls. Gaining commands shall be required to coordinate the requirements identified in the Technical Manual with Base/Facilities Maintenance to ensure proper installation. If additional funding is required for installation, gaining commands shall contact the MARCORSYSCOM PM-TMDE.

(2) New Facilities. N/A

(3) Interim Facilities. N/A

i. Packaging, Handling, Storage, and Transportation

(1) Packaging. Prior to packaging, using units shall follow the repackaging procedures outlined in the Technical Manual. Crating is required for shipment of the Tester, Fuel Injector major components and modules. Crates must be constructed with skids underneath so they can be handled with forklift trucks or a crane with slings. Items scheduled for long term storage or shipment to overseas destinations shall be in accordance with the level "A" requirements of MIL-STD-2073-IC, Method 10 and host nation requirements. Items scheduled for domestic shipment or immediate use shall be in accordance with ASTM D 3951-98, Standard Practice for Commercial Packaging. Marking for shipment shall be in accordance with MIL-STD-129.

(2) Handling. Normal handling techniques using a forklift truck, or crane with slings, can be employed for a properly crated Tester. The Tester should be lifted from underneath using a forklift or from above using slings placed under the test stand base. A spreader bar should be used to prevent damage to the Tester.

(3) Storage. The Tester, Fuel Injector must be kept upright and cannot be stacked during storage. It should be stored in a temperature and humidity controlled environment.

(4) Transportation. The Tester, Fuel Injector does not have any unique transportation requirements.

j. Transportability/Naval Integration. N/A

k. Warranties

(1) The Tester, Fuel Injector has a warranty on materials, parts, and workmanship for a period of 18 months after receipt by the using unit.

(2) The warranty administrator at MARCORLOGBASES, (Code 835-1) Albany, GA, can be reached by calling DSN 567-6534 or FAX DSN 567-6446.

(3) Shipping costs for supplies returned to the manufacturer by the government will be paid by the government. The manufacturer will then ship the necessary parts for replacement and pay shipping costs to return all supplies to the government. The using unit will then do all maintenance on the Tester, Fuel Injector.

(4) Warranty claims will be processed through the unit's respective FSSG maintenance channels to MARCORLOGBASES, (Code 835-1) Albany, GA 31704-5000.

l. System Safety and Hazardous Material. The Program Manager has determined that no Safety Assessment Report (SAR) needs to be conducted based on the asset's commercial nature. Utilization and attention to cautions and warnings found in the technical manuals shall be abided. No hazardous materials have been identified within the Tester, Fuel Injector. Disposal of hazardous waste shall be in accordance with local procedures.

m. Waivers and Plan of Action and Milestones. N/A

5. Actions Required to Place Equipment in Service

a. Gaining Commands

(1) Acceptance inspections shall be performed following the procedures outlined in the Technical Manual.

(2) Conduct an inventory of the Tester equipment per its enclosed packing list, and provide a signed copy to Commander, MARCORLOGBASES, (Code 845-3), Albany, GA with information copies to Commander, MARCORSYSCOM, (PM TMDE). COMMARCORSYSCOM and COMMARCORLOGBASES will be notified when the Tester is placed into service.

(3) Conduct an inventory of the FITS equipment per its enclosed packing list and provide signed copy to Commander, MARCORLOGBASES, (Code 845-3), Albany, GA with information copies to Commander, MARCORSYSCOM, (PM TMDE). The manufacturer will be contacted to obtain adapters for mounting and testing with the FITS in the event of new product fielding. Test procedures will also be obtained from the program office fielding the new equipment.

(4) Perform a Limited Technical Inspection (LTI) of the system, in accordance with procedures outlined in Marine Corps Order (MCO) 4790.5. All Testers will be accounted for in accordance with the most current editions of MCO P4400.150 and MCO P4400.82.

(5) After system fielding, provide, within six months, an assessment of each of the logistics support elements, both problems and accomplishments. Submit the evaluations per MCO 4105.4 and TM 4420/15-1 to DC/S I&L, COMMARCORSYSCOM, and COMMARCORLOGBASES.

(6) Materiel Defects Reporting. If any Tester, Fuel Injector components are determined to be damaged or defective, submit a SF368 Product Quality Deficiency Report (PQDR) in accordance with TM 4700-15/1_ and MCO 4855.10_. Report missing components by submitting a Supply Discrepancy Report (SDR) to the Program Manager, Warranty Administrator (Code 835-1), Marine Corps Logistics Bases (MARCORLOGBASES), Albany, GA 31704-5000 DSN 567-6606/6607.

(7) Retrograde of Existing Equipment. N/A

(8) Obtaining Support Consumables. The gaining command is required to budget for Using Unit Responsible Items to include SAC 1 and SAC 2 consumables. These items will be purchased directly from the contractor (See page 6, 2. Replenishment) after the contractor provided maintenance kits have been exhausted.

(9) Security Requirements. N/A

(10) Controlled Item Reporting. The Tester, Fuel Injector is a controlled item and will be maintained in accordance with the procedures covered in MCO P4400.82.

(11) Marine Corps Ground Equipment Resource Reporting (MCGERR). N/A

b. MARCORLOGBASES, Albany. Assign a Warranty Administrator to resolve warranty issues unresolved by user community, track PQDR's for trend analysis, and report results to the PM.

(1) Equipment Issue. Issue equipment in accordance with Fielding Methodology in paragraph three of this ULSS.

(2) Shipping. Notify all command activities of shipping information in regards to fielding.

(3) Fielding Delay. Notify all concerned activities of any delays that affect fielding of the equipment.

(4) Calibration. Full calibration prior to issue is required per MCO 4733.1A and will be performed by the manufacturer.

c. MARCORSYSCOM

(1) Manage program funds and budget for the initial fielding of the product.

(2) Ensure action is initiated to reflect current allowance data in the Equipment Allowance File (EAF) coinciding with the project in-service date.

(3) Provide all aspects of technical and logistical assistance to the gaining command.

(4) Maintain life cycle management of the system per MCO 4105.4 and TM 4420-15/1 as required.

Appendix A: List of Allowances and Delivery Schedules

T/E NO.	UNIT NAME	UNIT PLANNED ALLOWANCE	MULTIPLIER	TOTAL	DELIVERY SCHEDULE FY 99 BY QTR 1 2 3 4	FY00 BY QTR 1 2 3 4
7550	MCSSS, CAMP LEJEUNE, NC	2	1	2	2	2
N3136	GSMCO, 1ST FSSG, CAMP PENDLETON, CA	2	1	2	1	1
N3236	GSMCO, 2D FSSG, CAMP LEJEUNE, NC	2	1	2	1	1
N3336	GSMCO, 3D FSSG, CAMP KINSER, OKINAWA	2	1	2	1	1
N3436	GSMCO, 4TH FSSG, ROCK ISLAND, IL	2	1	2	1	1
B3331	CSSG3, KANEOEH BAY, HI	1	1	1		1

NOTE: The information provided above is accurate as of the date of publication of the ULSS. The Equipment Allowance File notes all subsequent changes to unit allowances and deliveries

Appendix B: Schedule of Events

Initial operating capability for the Tester, Fuel Injector is fourth quarter, FY 99.